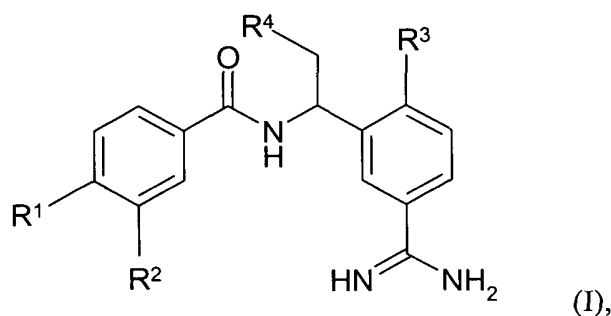


**What is claimed is:**

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1. A compound of the formula I



10 wherein:

$R^1$  denotes an amino,  $C_{1-5}$ -alkylamino,  $C_{3-7}$ -cycloalkylamino or (phenyl- $C_{1-3}$ -alkyl)-amino group which may be substituted in each case at the amino-nitrogen atom by a phenylcarbonyl or phenylsulphonyl group or by a  $C_{1-3}$ -alkyl or  $C_{1-3}$ -alkyl-carbonyl group optionally substituted in the alkyl moiety by a carboxy group, a group which may be converted in-vivo into a carboxy group, an amino,  $C_{1-3}$ -alkylamino or di-( $C_{1-3}$ -alkyl)-amino group, while two nitrogen atoms are separated from each other by at least two carbon atoms,

20 a di-( $C_{1-5}$ -alkyl)amino or N-( $C_{3-7}$ -cycloalkyl)- $C_{1-5}$ -alkylamino group, while the  $C_{1-5}$ -alkyl moiety may be substituted in each case by a hydroxy,  $C_{1-3}$ -alkoxy, amino,  $C_{1-3}$ -alkyl-amino or di-( $C_{1-3}$ -alkyl)-amino group, with the exception of the 1 position,

a 4- to 7-membered cycloalkyleneiminocarbonyl or cycloalkyleneiminosulphonyl group optionally substituted by a  $C_{1-3}$ -alkyl, amino- $C_{1-3}$ -alkyl,  $C_{1-3}$ -alkylamino- $C_{1-3}$ -alkyl, di-

25

(C<sub>1-3</sub>-alkyl)-amino-C<sub>1-3</sub>-alkyl, aminocarbonyl, C<sub>1-3</sub>-alkylamino-carbonyl or di-(C<sub>1-3</sub>-alkyl)-aminocarbonyl group,

a 2,5-dihydro-1*H*-pyrrol-1-yl-carbonyl group,

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an aminosulphonyl group optionally substituted by one or two C<sub>1-3</sub>-alkyl groups,

a C<sub>3-7</sub>-cycloalkyl-carbonyl group, while

10        the methylene group in the 3 or 4 position of a C<sub>5-7</sub>-cycloalkyl-carbonyl group may be replaced by a -NH group wherein

the hydrogen atom of the -NH group may be replaced by a C<sub>1-3</sub>-alkyl or C<sub>1-3</sub>-alkyl-carbonyl group,

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a phenylcarbonyl or heteroarylcarbonyl group,

which may be substituted in the phenyl or heteroaryl moiety by a fluorine, chlorine or bromine atom, by a trifluoromethyl, C<sub>1-3</sub>-alkyl, amino-C<sub>1-3</sub>-alkyl, C<sub>1-3</sub>-alkyl-amino-C<sub>1-3</sub>-alkyl, di-(C<sub>1-3</sub>-alkyl)-amino-C<sub>1-3</sub>-alkyl or C<sub>1-3</sub>-alkoxy group,

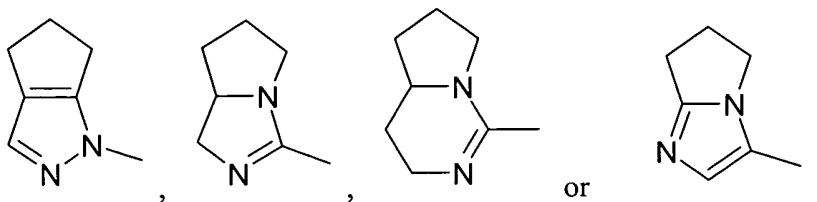
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a C<sub>1-3</sub>-alkyl group optionally monosubstituted by an amino, C<sub>1-3</sub>-alkylamino, di-(C<sub>1-3</sub>-alkyl)-amino, hydroxy, phenyl or a 4- to 7-membered cycloalkyleneimino group,

25        while the phenyl moiety may be substituted by a fluorine, chlorine or bromine atom, by a trifluoromethyl, C<sub>1-3</sub>-alkyl, amino-C<sub>1-3</sub>-alkyl, C<sub>1-3</sub>-alkyl-amino-C<sub>1-3</sub>-alkyl, di-(C<sub>1-3</sub>-alkyl)-amino-C<sub>1-3</sub>-alkyl or C<sub>1-3</sub>-alkoxy group,

or a group of formula

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wherein in the heterocyclic moiety a hydrogen atom may be replaced by an aminomethyl or aminocarbonyl group in each case,

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$R^2$  denotes a hydrogen, fluorine, chlorine or bromine atom, a  $C_{1-3}$ -alkyl group wherein the hydrogen atoms may be wholly or partially replaced by fluorine atoms, a  $C_{2-3}$ -alkenyl,  $C_{1-3}$ -alkoxy or trifluoromethoxy group,

10  $R^3$  denotes a hydrogen atom or a hydroxy or amino group and

$R^4$  denotes a phenyl or heteroaryl group which is optionally substituted by a hydroxy,  $C_{1-4}$ -alkyloxy, benzyloxy, hydroxycarbonyl- $C_{1-3}$ -alkoxy,  $C_{1-3}$ -alkyloxy-carbonyl- $C_{1-3}$ -alkyloxy, aminocarbonyl- $C_{1-3}$ -alkyloxy,  $C_{1-3}$ -alkylaminocarbonyl- $C_{1-3}$ -alkyloxy, di- $(C_{1-3}$ -alkyl)-aminocarbonyl- $C_{1-3}$ -alkyloxy, carboxy,  $C_{1-3}$ -alkyloxy-carbonyl group,

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a 1-H-pyridonyl or 1- $(C_{1-3}$ -alkyl)-pyridonyl group,

a 4- to 7-membered cycloalkyleneimino group or

20

a 4- to 7-membered cycloalkyl group wherein one or two methylene groups are replaced by an -NH or  $-N(C_{1-3}\text{-alkyl})$ - group and wherein one or two of the methylene groups adjacent to the -NH or  $-N(C_{1-3}\text{-alkyl})$ - group may each be replaced by a carbonyl group, with the proviso that a cycloalkyl group as hereinbefore defined wherein two -NH or - $N(C_{1-3}\text{-alkyl})$ - groups are separated from one another by precisely one  $-CH_2-$  group is excluded,

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while, unless otherwise stated, the term heteroaryl group denotes a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C<sub>1-3</sub>-alkyl, carboxy, C<sub>1-3</sub>-alkoxy-carbonyl or C<sub>1-3</sub>-alkoxy-carbonylamino group, while

5        the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C<sub>1-3</sub>-alkyl or phenyl-C<sub>1-3</sub>-alkyl group, an oxygen or sulphur atom or

10       contains an imino group optionally substituted by a C<sub>1-3</sub>-alkyl, amino-C<sub>1-3</sub>-alkyl, C<sub>1-3</sub>-alkylamino-C<sub>1-3</sub>-alkyl, di-(C<sub>1-3</sub>-alkyl)-amino-C<sub>1-3</sub>-alkyl or phenyl-C<sub>1-3</sub>-alkyl group or an oxygen or sulphur atom and additionally contains a nitrogen atom or

contains an imino group optionally substituted by a C<sub>1-3</sub>-alkyl or phenyl-C<sub>1-3</sub>-alkyl  
15       group and two or three nitrogen atoms,

and moreover a phenyl ring may be fused to the abovementioned monocyclic heterocyclic groups via two adjacent carbon atoms and the binding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl  
20       ring,

while the amidino group contained in the compounds of general formula I may be substituted by a C<sub>1-10</sub>-alkoxy-carbonyl, 2,2,2-trichloroethoxycarbonyl, phenyloxycarbonyl, benzyloxycarbonyl, phenylcarbonyl, hydroxy, C<sub>1-5</sub>-alkyloxy,  
25       benzyloxy or phenyloxy group,

and while the abovementioned alkyl and alkoxy groups include straight-chain and branched alkyl and alkoxy groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

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or a tautomer or pharmaceutically acceptable salt thereof.

2. A compound of the formula I according to claim 1, wherein

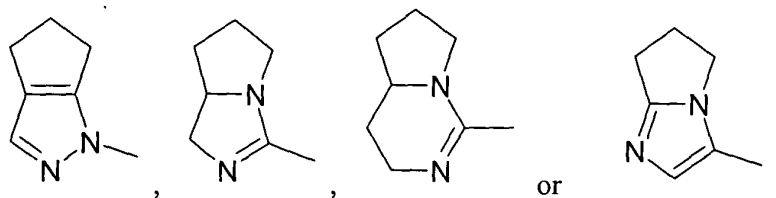
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$R^2$ ,  $R^3$  and  $R^4$  are defined as in claim 1 and

$R^1$  denotes a 4- to 7-membered cycloalkyleneimino-carbonyl group optionally substituted  
by a  $C_{1-3}$ -alkyl, amino- $C_{1-3}$ -alkyl,  $C_{1-3}$ -alkylamino- $C_{1-3}$ -alkyl, di-( $C_{1-3}$ -alkyl)-  
10 amino- $C_{1-3}$ -alkyl, aminocarbonyl,  $C_{1-3}$ -alkylamino-carbonyl or di-( $C_{1-3}$ -alkyl)-  
aminocarbonyl group,

a 2,5-dihydro-1*H*-pyrrol-1-ylcarbonyl group or

15 a group of formula



20 wherein in the heterocyclic moiety a hydrogen atom may be replaced in each case  
by an aminomethyl or aminocarbonyl group,

while the amidino group contained in the compounds of general formula I may be  
substituted by a  $C_{1-10}$ -alkoxy-carbonyl, 2,2,2-trichloroethoxycarbonyl,  
phenyloxycarbonyl, benzyloxycarbonyl, phenylcarbonyl, hydroxy,  $C_{1-5}$ -alkyloxy,  
25 benzyloxy or phenyloxy group,

the abovementioned alkyl and alkoxy groups including straight-chain and branched alkyl and alkoxy groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

5 or a tautomer or pharmaceutically acceptable salt thereof.

3. A compound of the formula I according to claim 2, wherein

10  $R^1$ ,  $R^2$  and  $R^3$  are defined as in claim 2 and

$R^4$  denotes a phenyl, furanyl, thienyl, pyrrolyl, pyrazolyl, pyridinyl, pyrazinyl, pyridazinyl, pyrimidinyl, thiazolyl, tetrazolyl or isoxazolyl group which is optionally substituted by a hydroxy,  $C_{1-4}$ -alkyloxy, benzyloxy, hydroxycarbonyl- $C_{1-3}$ -alkoxy,  $C_{1-3}$ -alkyloxy-carbonyl- $C_{1-3}$ -alkyloxy, aminocarbonyl- $C_{1-3}$ -alkyloxy,  $C_{1-3}$ -alkylaminocarbonyl- $C_{1-3}$ -alkyloxy, di- $(C_{1-3}$ -alkyl)-aminocarbonyl- $C_{1-3}$ -alkyloxy, carboxy,  $C_{1-3}$ -alkyloxy-carbonyl group,

while the amidino group contained in the compounds of general formula I may be substituted by a  $C_{1-10}$ -alkoxy-carbonyl, 2,2,2-trichloroethoxycarbonyl, phenyloxycarbonyl, benzyloxycarbonyl, phenylcarbonyl, hydroxy,  $C_{1-5}$ -alkyloxy, benzyloxy or phenyloxy group,

the abovementioned alkyl and alkoxy groups including straight-chain and branched alkyl and alkoxy groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

or a tautomer or pharmaceutically acceptable salt thereof.

30 4. A compound selected from the group consisting of:

(a) N-[1-(3-amidino-phenyl)-2-(1H-tetrazol-5-yl)-ethyl]-4-(2,5-dihydro-pyrrol-1-yl-carbonyl)-3-methyl-benzamide,

(b) N-[1-(3-amidino-phenyl)-2-(1H-tetrazol-5-yl)-ethyl]-3-methyl-4-(pyrrolidin-1-yl-carbonyl)-benzamide,

(c) N-[1-(5-amidino-2-hydroxy-phenyl)-2-phenyl-ethyl]-3-methyl-4-(pyrrolidin-1-yl-carbonyl)-benzamide, and

(d) N-[1-(5-amidino-2-hydroxy-phenyl)-2-(pyridin-3-yl)-ethyl]-3-methyl-4-(pyrrolidin-1-yl-carbonyl)-benzamide,

or an analog of compound (a), (b) or (c) wherein the amidino group is substituted by a hydroxy, C<sub>1-3</sub>-alkyloxy, C<sub>1-8</sub>-alkoxy-carbonyl or phenylcarbonyl group,

or a pharmaceutically acceptable salt thereof.

5. A pharmaceutical composition comprising a compound in accordance with claim 1, 2, 3 or 4 together with one or more inert carriers and/or diluents.

6. A method for treating or inhibiting thrombus formation which comprises administering to a host in need of antithrombotic treatment or at risk of thrombus formation inhibition an antithrombotic amount of a compound in accordance with claim 1, 2, 3 or 4.